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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,940	12/23/2003	Richard C. Caponi	SPIROL/111/US	9382
2543	7590	09/08/2005	EXAMINER	
ALIX YALE & RISTAS LLP 750 MAIN STREET SUITE 1400 HARTFORD, CT 06103			FERGUSON, MICHAEL P	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/743,940

Applicant(s)

CAPONI, RICHARD C.

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/22/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Objections***

2. Claim 19 is objected to because of the following informalities:

Claim 19 (line 1) recites "of claim". It should recite --of claim 15--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3,6,7,9-13,15,17,18,20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kerb-Konus-Vertriebs (DE 2 243 564).

As to claim 1, Kerb-Konus-Vertriebs discloses a pin for insertion in a hole in a host material, comprising:

an elongated cylindrical body 1 constructed from a substantially homogeneous material, the body having a longitudinal axis and a formed portion providing a retaining surface that engages an inside surface of the hole;

the retaining surface defined by a plurality of helical lands **5** having a width separated by a plurality of helical grooves **2** of approximately (near the value of) equal width, the lands being partially formed from pin material displaced from the grooves, wherein a portion of each land includes a cylindrical surface parallel to the longitudinal axis at a substantially uniform radial distance from the longitudinal axis (Figures 1 and 2).

As to claim 2, Kerb-Konus-Vertriebs discloses a pin wherein the lands **5** are oriented at an angle of approximately (near the value of)  $45^{\circ}$  relative to the longitudinal axis (Figure 1).

As to claim 3, Kerb-Konus-Vertriebs discloses a pin wherein the pin is formed from cylindrical stock having a first diameter and the retaining surface has a second diameter larger than the first diameter (page 4 lines 2-3).

As to claim 6, Kerb-Konus-Vertriebs discloses a pin wherein the lands **5** have a surface area that is approximately 40% of a surface area of the formed portion (Figure 1).

As to claim 7, Kerb-Konus-Vertriebs discloses a pin wherein a majority of each of the lands **5** has a substantially uniform height extending above the first diameter (cylindrical stock diameter prior to rolling; inherently the first diameter is approximately half of the depth of the groove) and the width of the land is approximately (near the value of) five times the height (Figure 1).

As to claim 9, Kerb-Konus-Vertriebs discloses a pin wherein a majority of each land **5** is a cylindrical surface parallel to and having a substantially uniform radial displacement from the longitudinal axis (Figure 2).

As to claim 10, Kerb-Konus-Vertriebs discloses a pin and substrate combination comprising:

a substrate having a first hardness and defining a hole having a first diameter;  
and

a pin for insertion into the hole, the pin having a second hardness less than the first hardness (page 3 lines 16-19) and a retaining surface at a second diameter larger than the first diameter, the retaining surface defined by a plurality of lands **5** having a width separated by a plurality of grooves **2** of approximately (near the value of) equal width,

wherein a portion of each land includes a cylindrical surface parallel to the longitudinal axis at a substantially uniform radial distance from the longitudinal axis (Figures 1 and 2).

As to claim 11, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the second diameter is no more than approximately 4% larger (inherently) than the first diameter.

As to claim 12, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the lands **5** and the grooves **2** are helical (Figure 1).

As to claim 13, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the lands **5** and the grooves **2** are helical and have an angle of approximately (near the value of)  $45^{\circ}$  relative to an axis of the pin (Figure 1).

As to claim 15, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the pin is formed from cylindrical stock having a third diameter and the second diameter is greater than the third diameter (page 4 lines 2-3).

As to claim 17, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the retaining surface is carried on a formed portion of the pin and the lands **5** have a surface area which is approximately 40% of a surface area of the formed portion (Figure 1).

As to claim 18, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein a majority of each of the lands **5** has a substantially uniform height extending above the third diameter (cylindrical stock diameter prior to rolling; inherently the third diameter is approximately half of the depth of the groove) and the width of the land is approximately five times the height (Figure 1).

As to claim 20, Kerb-Konus-Vertriebs discloses a pin and substrate combination wherein the lands **5** are partially formed from pin material displaced from the grooves **2** (page 4 lines 2-3).

As to claim 21, Kerb-Konus-Vertriebs discloses a pin for insertion in a hole in a host material and frictional retention therein, comprising:

an elongated cylindrical body **1** having a longitudinal axis, a cylindrical pilot portion **4**, and a retainer portion defined by a plurality of alternating helical lands **5** and

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grooves 2, wherein the lands provide a retaining surface for engaging an inside surface of the hole;

the retaining surface being a radial distance from the axis that is greater than a radius of the pilot portion and occupying approximately 40% of the circumference of the retainer portion when the retainer portion is viewed in cross section perpendicular to the axis (Figures 1 and 2).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4,5,8,14,16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerb-Konus-Vertriebs.

As to claim 4, Kerb-Konus-Vertriebs fails to disclose a pin wherein the second diameter is no greater than approximately 9% larger than the first diameter.

The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin as disclosed by Kerb-Konus-Vertriebs to have a second diameter no greater than approximately 9% larger than the first diameter as such practice is a design consideration within the skill of the art.

As to claim 5, Kerb-Konus-Vertriebs discloses a pin wherein the helical grooves 2 and lands 5 are oriented at an angle of approximately (near the value of) 45° relative to an axis of the pin (Figure 1).

As to claim 8, Kerb-Konus-Vertriebs fails to disclose a pin wherein a majority of each of the lands has a substantially uniform height extending above the first diameter and the width of the land is between five and fifteen times the height.

The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a pin as disclosed by Kerb-Konus-Vertriebs to have a majority of each of the lands having a substantially uniform height extending above the first diameter and the width of the land is between five and fifteen times the height as such practice is a design consideration within the skill of the art.

As to claim 14, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the first hardness is approximately 10 points higher on the Rockwell Rc scale than the second hardness.

The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a combination as disclosed by Kerb-Konus-Vertriebs wherein the first hardness



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is approximately 10 points higher on the Rockwell Rc scale than the second hardness as such practice is a design consideration within the skill of the art.

As to claim 16, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein the second diameter is less than approximately 9% larger than the third diameter.

The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a combination as disclosed by Kerb-Konus-Vertriebs to have a second diameter no greater than approximately 9% larger than the third diameter as such practice is a design consideration within the skill of the art.

As to claim 19, Kerb-Konus-Vertriebs fails to disclose a pin and substrate combination wherein a majority of each of the lands has a substantially uniform height extending above the third diameter and the width of the land is between five and fifteen times the height.

The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a combination as disclosed by Kerb-Konus-Vertriebs to have a majority of each of the lands having a substantially uniform height extending above the first diameter and the width of the land is between

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five and fifteen times the height as such practice is a design consideration within the skill of the art.

***Response to Arguments***

7. Applicant's arguments, filed August 18, 2005, with respect to the rejection(s) of claim(s) 13 and 15-21 under U.S.C. 102(b) in view of Johnson (US 2,223,871) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kerb-Konus-Vertriebs (DE 2 243 564).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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